

REMARKS

Claims 7, 8, 15 and 17 are pending in this application. By this Amendment, claims 1-6 and 9-14 are canceled. No new matter is added.

Claims 7 and 17 are rejected under 35 U.S.C. §103(a) over Scott et al., WO 2004/021486, in view of Uchida et al., JP 2004-134132. Applicants respectfully traverse the rejection.

Claim 7 recites that the cathode catalyst layer contains an anion exchange resin as a binder. The Office Action admits that Scott fails to disclose or to have rendered obvious this feature but alleges that Uchida overcomes the deficiencies of Scott. Applicants respectfully disagree for at least the following two reasons.

First, the electrocatalyst in Scott's electrode is present as a layer or coating of a mesh support (see page 18, lines 12-15). Scott does not disclose or render obvious forming an electrocatalyst layer by using a binder. On the other hand, Uchida teaches that an ion-exchange resin is used as a binder for composite electrodes (see paragraph [0019] of the machine translation).

Because Scott's electrode does not use a binder, Scott's electrode is completely different from the composite electrode in Uchida that is formed using a binder. Therefore, one of ordinary skill in the art would not have had reason to modify the electrode of Scott based on Uchida, wherein an ion-exchange resin is used as a binder for composite electrodes.

Second, the Office Action alleges that "[i]t would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize an anionic exchange resin as the binder for the cathode catalyst layer, because Scott et al. discloses anion exchange polymers provide selective transport of negatively charged ions (page 20, lines 1-25; page 21, lines 1-22)." But, the cited portions of Scott are an explanation of an anion exchange membrane, not an explanation of an anion exchange polymer as a binder. Therefore one of

ordinary skill in the art would not have used an anion exchange resin as a binder for the cathode catalyst layer because Scott teaches an anion exchange membrane.

For at least these two reasons, the combination of Scott and Uchida fails to disclose or to have rendered obvious the above-referenced features of claim 7. Claim 17 is patentable for at least the same reasons, as well as for the additional features it recites. Applicants respectfully request withdrawal of the rejection.

Claim 8 is rejected under 35 U.S.C. §103(a) over Scott in view of Uchida and Mao et al., U.S. Patent No. 6,238,534. The rejection is respectfully traversed.

The rejection of claim 8 is premised upon the presumption that the combination of Scott and Uchida discloses or would have rendered obvious all of the features of claim 7. As discussed above, these references fail to do so. Further, Mao fails to overcome the deficiencies of Scott and Uchida. Thus, claim 8 is patentable by reason of its dependency from independent claim 7, as well as for the additional features it recites. Applicants respectfully request withdrawal of the rejection.

Claim 15 is rejected under 35 U.S.C. §103(a) over Scott in view of Uchida, Mao and Fleischer et al., U.S. Patent Application Publication No. 2002/0127474. The rejection is respectfully traversed.

The rejection of claim 15 is premised upon the presumption that the combination of Scott and Uchida discloses or would have rendered obvious all of the features of independent claim 7. As discussed above, these references fail to do so. Further, Mao and Fleischer fail to overcome the deficiencies of Scott and Uchida. Thus, claim 15 is patentable by reason of its dependency from independent claim 7, as well as for the additional features it recites. Applicants respectfully request withdrawal of the rejection.

The Office Action, on pages 7 and 8 states that "The applicant has yet to provide any factual evidence in support of the criticality of the cathode catalyst layer containing anion

exchange resin as a binder when silver is the catalyst. ... Also, Applicant is reminded that objective evidence, which must be factually supported by an appropriate affidavit or declaration to be of probative value includes evidence of unexpected results, commercial success, or solution of a long-felt need."

Submitted concurrently herewith is a Declaration by Atsushi Sano including experimental data that corresponds to the claimed invention, as well as a cation exchange resin substituted for an anion exchange resin and data for using neither an anion exchange resin or cation exchange resin. The Declaration contains factual evidence in support of the criticality of the cathode catalyst layer containing anion exchange resin as a binder when silver is the catalyst.

In view of the foregoing, Applicants respectfully submit that this application is in condition for allowance. Applicants expressly solicit favorable reconsideration and prompt allowance of the pending claims.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, Applicants invite the Examiner to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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JAO:SDJ/cfr

Attachments:

Request for Continued Examination
Petition for Extension of Time
Declaration

Date: January 4, 2010

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